



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/671,687

09/28/2000

David Wallach

WALLACH=25

7238

1444 7590 05/22/2009
BROWDY AND NEIMARK, P.L.L.C.
624 NINTH STREET, NW
SUITE 300
WASHINGTON, DC 20001-5303

EXAMINER

O HARA, EILEEN B

ART UNIT

PAPER NUMBER

1638

MAIL DATE

DELIVERY MODE

05/22/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/671,687	Applicant(s) WALLACH ET AL.	
	Examiner EILEEN B. O HARA	Art Unit 1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2, 3, 20-24, 38, 42, 44-46 and 48-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 20-24, 38, 42, 44-46 and 48-50 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1644

DETAILED ACTION

Change of Examiner and Art Unit

1. The Examiner and Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1638 and Examiner Eileen O'Hara.

Upon examination of the art, a new rejection under 35 U.S.C. 102 is being applied.

Status of Claims

2. Claims 2, 3, 20-24, 38, 42, 44-46 and 48-50 are pending in the instant application.

Response to Amendment

Maintained Rejections

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 2, 20-24, 38, 42 and 48-50 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims remain rejected for the reasons discussed in the office action mailed April 10, 2008, and below.

Art Unit: 1644

In the response filed October 10, 2008, Applicants, state that the polypeptide of SEQ ID NO: 3 has 949 amino acid residues, and not 625 residues as the examiner in the previous office stated. It is acknowledged that Applicants are correct. As such, Applicants state that the maximum number of 10 changes would still leave a protein having 99% identity to the reference sequence and a total of only 5 changes would leave a protein having 99.5% identity with the reference compound, and thus the present situation is substantially different from those in previous recent Board decisions, such as *Ex parte Kubin* and *Ex parte Porro*. Applicants argue that those cases involved written description decisions in which the claims required 80% and 90% identity, respectively, and these claims are not dispositive of the present situation as the present claims require 99% or 99.5% identity. Applicants assert that the genus of proteins encompassed by the present claims is much smaller than those found in *Kubin* and *Porro*, and while it is true that molecular biology is an unpredictable art and there are examples that can be cited in which only a few changes will substantially change the activity of a protein, these would be exceptions to the rule that such a small number of changes would not be expected to affect binding properties. Also argued is that while there may be exceptions to the presumption of conservation of function for every one of the proteins covered by the present claims, the claims do not read on any exceptions because the claims require that the expected function be present. Also argued on page 6 of the response is that the examiner has not cited any references that would suggest that the allegedly unpredictable nature of molecular binding would cause one to believe that 0.5% of conservative substitutions would be expected to affect binding properties of a protein.

Art Unit: 1644

Applicants' arguments have been fully considered but are not deemed persuasive.

According to the new Written Description Guidelines, an analogous situation can be found in example 11A, claim 2 of the new guidelines, in which an art-recognized structure-function correlation is not present. In this example, claim 2 is drawn to an isolated nucleic acid that encodes a polypeptide with at least 85% amino acid sequence identity to SEQ ID NO: 2, wherein the polypeptide has activity X. The specification discloses only a single species that encodes SEQ ID NO: 2, and there are no other drawings or structural formulas that encode either SEQ ID NO: 2 or a sequence with 85% sequence identity to SEQ ID NO: 2. There is no teaching of which 15% of the amino acids can vary from SEQ ID NO: 2 and still result in a protein that retains activity X, there is no teaching of art-recognized correlation between any structure other than SEQ ID NO: 2 and novel activity X, and there is no teaching of which nucleic acids that encode a polypeptide with at least 85% sequence identity to SEQ ID NO: 2 encode a polypeptide having the required activity X. The general knowledge in the art is that some amino acid variations are tolerated without losing a protein's tertiary structure, and conservation of structure is not necessarily a surrogate for conservation of function. In this case, there is no disclosed correlation between structure and function, and the need for correlating may vary. More specifically, those of skill in the art might require more or less correlating information depending on the kind of protein activity. If activity X is simply structural, e.g., a member of the collagen class, correlating information might not be a critical factor. However, if activity X is enzymatic, and there is no disclosure of the active site amino acid residues responsible for the catalytic activity, lack of that kind of correlating information may be a problem. In conclusion, there was no known or disclosed correlation between a structure other than SEQ ID NO: 2 and activity X,

Art Unit: 1644

there was no general knowledge in the art about activity X to suggest that general similarity of structure confers the activity, and one of skill in the art would not accept the disclosure of SEQ ID NO: 2 as representative of other proteins having activity X. Therefore, the specification, taken with the knowledge in the prior art, fails to satisfy the written description requirement of 35 U.S.C. 112, first paragraph.

In the instant application, there was only one protein disclosed having the amino acid sequence of SEQ ID NO: 3 and having the activity of binding TRAF2. There was no identification of a binding domain or domains, and there was no other protein disclosed in the art that had the same activity, and accordingly, one of skill in the art would not accept the disclosure of SEQ ID NO: 3 as representative of other proteins varying by 5 or 10 amino acids, even conservative amino acid substitutions, having the activity of binding TRAF2. Therefore, for these reasons, the rejection is maintained.

New Rejections

Priority

4. Applicant has sought allowance of claims encompassing SEQ ID NO: 3 and variants of SEQ ID NO: 3 with at least 10 or 5 amino acid changes. Applicant's claims to priority as a continuation-in-part of US Patent Application Number 09/646,403, which is a national stage application of PCT/IL99/00158, as well as applicant's claim to priority of two foreign patent applications (IL126024 and IL134604) are also acknowledged.

US Application 09/646,403 and foreign priority document IL126024 disclose clone #10, a nucleotide sequence for a partial polypeptide later identified as instantly claimed SEQ ID NO: 3 (i.e., a fragment consisting of amino acids 548-949 of SEQ ID NO: 3). However, no clear

Art Unit: 1644

support exists for the full length of SEQ ID NO: 3 or, based upon the maximum possible identity given the length of the disclosed fragment in the cited priority documents, any variants of SEQ ID with greater than 42% identity to SEQ ID NO: 3 (See the Office Actions mailed 10/1/2004 and 6/13/2005).

However, foreign priority document IL134604 does disclose SEQ ID NO: 3 in its entirety and this priority claim was perfected upon receipt of the foreign priority document on 3/29/2005. Therefore, in the instant case, claims encompassing more than the 548-949 amino acid fragment disclosed in IL126024 and US Application Number 09/646,403 are only granted priority to the foreign priority document IL134604 filed on 2/17/2000.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 21-24 and 44-46 are rejected under 35 U.S.C. 102(e) as being anticipated by Lal et al., US Published Application No. 10/921,707, effective priority date April 27, 1999, provisional application 60/131,321.

Claims 21-24 and 44-46 are drawn to molecules having the binding portion of an antibody capable of bind to the protein of SEQ ID NO: 3, wherein the molecule is an antibody, an monoclonal antibody, and a composition comprising the molecules having the binding portion of an antibody capable of bind to the protein of SEQ ID NO: 3.

Art Unit: 1644

Lal et al. disclose a protein (SEQ ID NO: 9) that is identical to amino acids 221-949 of SEQ ID NO: 3 of the instant invention except for a one amino acid mismatch at amino acid 38 and two, 1 amino acid insertions between amino acids 281 and 282 and between amino acids at amino acids 343 and 344. The instant application has priority to the full length protein as of February 17, 2000 and the amino acids 548-949 as of March 18, 1999. Lal et al. disclosed amino acids 221-949 of SEQ ID NO: 3 of the instant application in SEQ ID NO: 7 of 60/131,321 and SEQ ID NO: 9 of 10/921,707. Therefore, Lal et al. disclosed amino acids 221-547 of SEQ ID NO: 3 of the instant invention prior to that of the instant application. Lal et al. teach antibodies and monoclonal antibodies to the protein [0049, 0068, 0137, 0155, 0156, 0169], and that compositions comprising antibodies to the protein and a pharmaceutically acceptable carrier can be used therapeutically [0173-0175]. Because amino acids 1-328 of the protein of Lal et al. are so similar to amino acids 221-547 of the protein of SEQ ID NO: 3 of the instant invention, the vast majority of the antibodies of Lal et al. would bind to amino acids 221-547 of SEQ ID NO: 3 of the instant invention. Therefore Lal et al. anticipates the claims.

The alignments of SEQ ID NO: 9 from 10/921,717 and SEQ ID NO: 7 of 60/131,321 are present below.

GenCore version 6.3
Copyright (c) 1993 - 2009 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: May 13, 2009, 11:31:09 ; Search time 1 Seconds
(without alignments)
0.694 Million cell updates/sec

Title: US-09-671-687A-3

Art Unit: 1644

Perfect score: 5034

Sequence: 1 MSSGLWSQEKVTSPYWEERI.....RLLCDAYMCMYQSPTMSLYK 949

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1 seqs, 731 residues

Total number of hits satisfying chosen parameters: 1

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : seq9.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	3862	76.7	731	1	US-10-921-707-9	Sequence 9, Appli

ALIGNMENTS

RESULT 1

US-10-921-707-9

; Sequence 9, Application US/10921707

; GENERAL INFORMATION:

; APPLICANT: INCYTE PHARMACEUTICALS, INC.

; APPLICANT: LAL, Preeti

; APPLICANT: TANG, Y. Tom

; APPLICANT: YUE, Henry

; APPLICANT: HILLMAN, Jennifer L.

; APPLICANT: BANDMAN, Olga

; APPLICANT: CORLEY, Neil C.

; APPLICANT: GUEGLER, Karl J.

; APPLICANT: PATTERSON, Chandra

; APPLICANT: AZIMZAI, Yalda

; APPLICANT: BAUGHN, Mariah R.

; TITLE OF INVENTION: HUMAN CYTOSKELETON ASSOCIATED PROTEINS

; FILE REFERENCE: PF-0594 PCT

; CURRENT APPLICATION NUMBER: US/10/921,707

; CURRENT FILING DATE: 2004-08-19

; PRIOR APPLICATION NUMBER: US/09/786,797

Art Unit: 1644

```
; PRIOR FILING DATE: 2001-06-25
; PRIOR APPLICATION NUMBER: 09/156,470; unassigned; 60/131,321
; PRIOR FILING DATE: 1998-09-18; 1998-09-18; 1999-04-27
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PERL Program
; SEQ ID NO 9
;   LENGTH: 731
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;     NAME/KEY: misc_feature
;   OTHER INFORMATION: Incyte ID No: 2363327
US-10-921-707-9
```

Query Match		36.7%;	Score 3862;	DB 1;	Length 731;
Best Local Similarity		99.6%;	Pred. No. 0;		
Matches	728;	Conservative	0;	Mismatches	1; Indels 2; Gaps 2;
Qy	221	MQVELPPLEINSRVSLKGGETIESGTVIFCDVLPKGESLGYFVGVDMDNPIGNWDGRFDG	280		
Db	1	MQVELPPLEINSRVSLKVGETIESGTVIFCDVLPKGESLGYFVGVDMDNPIGNWDGRFDG	60		
Qy	281	V-LCSFACVESTILLHINDIIPESVTQERRPPKLAFMSRGVGDGKSSSHNKPATGSTSD	339		
Db	61	VQLCSFACVESTILLHINDIIPESVTQERRPPKLAFMSRGVGDGKSSSHNKPATGSTSD	120		
Qy	340	PGNR-RSELFYTLNGSSVDSQPQSKSKNTWYIDEVAEDPAKSLTEISTDFDRSSPPLQPP	398		
Db	121	PGNRRNSELFYTLNGSSVDSQPQSKSKNTWYIDEVAEDPAKSLTEISTDFDRSSPPLQPP	180		
Qy	399	PVNSLTTENRFHSLPFSLTMPNTNGSIGHSPLSLSAQSVMEELNTAPVQESPLAMPPG	458		
Db	181	PVNSLTTENRFHSLPFSLTMPNTNGSIGHSPLSLSAQSVMEELNTAPVQESPLAMPPG	240		
Qy	459	NSHGLEVGSLAEVKENPPFYGVIRWIGQPPGLNEVLAGLELEDEACAGCTDGTFRGTRYFT	518		
Db	241	NSHGLEVGSLAEVKENPPFYGVIRWIGQPPGLNEVLAGLELEDEACAGCTDGTFRGTRYFT	300		
Qy	519	CALKKALFVKLKSRRPDSRFASLQPVSNQIERCNSLAFGGYLSEVVEENTPPKMEKEGLE	578		
Db	301	CALKKALFVKLKSRRPDSRFASLQPVSNQIERCNSLAFGGYLSEVVEENTPPKMEKEGLE	360		
Qy	579	IMIGKKKGIQGHYNACYLDSTLFLCLFAFSSVLDTVLLRPKEKNDVEYYSETQELLRTEIV	638		
Db	361	IMIGKKKGIQGHYNACYLDSTLFLCLFAFSSVLDTVLLRPKEKNDVEYYSETQELLRTEIV	420		
Qy	639	NPLRIYGYVCATKIMKLKRIKLEKVEAASGFTSEEKDPPEEFLNLFHHILRVEPLLKIRSA	698		
Db	421	NPLRIYGYVCATKIMKLKRIKLEKVEAASGFTSEEKDPPEEFLNLFHHILRVEPLLKIRSA	480		
Qy	699	GQKVQDCYFYQIFMEKNEKVGVPITIQQLLEWSFINSNLKFAEAPSLIIQMPRFGKDFKL	758		
Db	481	GQKVQDCYFYQIFMEKNEKVGVPITIQQLLEWSFINSNLKFAEAPSLIIQMPRFGKDFKL	540		
Qy	759	FKKIFPSLELNITDLDLLETPRQCRICGGLAMYECRECYDDPDISAGKIKQFCKTCNTQVH	818		
Db	541	FKKIFPSLELNITDLDLLETPRQCRICGGLAMYECRECYDDPDISAGKIKQFCKTCNTQVH	600		
Qy	819	LHPKRLNHKYNPVSLPKDLPDWDWRHGCI PCQNMELFAVLCIETSHYVAFVKYKGDDSAW	878		
Db	601	LHPKRLNHKYNPVSLPKDLPDWDWRHGCI PCQNMELFAVLCIETSHYVAFVKYKGDDSAW	660		
Qy	879	LFSDSMADRDGGQNGFNIPQVTPCEVGEYLMKSLLEDLHSLDSRRIQGCARRLLCDAVMC	938		

Art Unit: 1644

```
Db          |||||||||||||||||||||||||||||||||||||||||||||||||||||||
661 LFFDSMADRDGGQNGFNIPQVTPCPEVGEYLGKMSLEDLHSLDSRRIQGCARRLLCDAYMC 720

Qy          939 MYQSPTMSLYK 949
          |||||||||||
Db          721 MYQSPTMSLYK 731
```

RESULT 1

US-60-131-321-7

; Sequence 7, Application US/60131321

; GENERAL INFORMATION:

; APPLICANT: Tang, Y. Tom

; APPLICANT: Lal, Preeti

; APPLICANT: Yue, Henry

; APPLICANT: Hillman, Jennifer L.

; APPLICANT: Bandman, Olga

; APPLICANT: Azimzai, Yalda

; APPLICANT: Baughn, Mariah R.

; TITLE OF INVENTION: HUMAN CYTOSKELETAL PROTEINS

; FILE REFERENCE: PF-0692 P

; CURRENT APPLICATION NUMBER: US/60/131,321

; CURRENT FILING DATE: 1999-04-27

; NUMBER OF SEQ ID NOS: 28

; SOFTWARE: PERL Program

; SEQ ID NO 7

; LENGTH: 731

; TYPE: PRT

; ORGANISM: Homo sapiens

; FEATURE: -

; OTHER INFORMATION: 2363327

US-60-131-321-7

Query Match 76.7%; Score 3862; DB 1; Length 731;

Best Local Similarity 99.6%; Pred. No. 0;

Matches 728; Conservative 0; Mismatches 1; Indels 2; Gaps

2;

```
Qy          221 MQVELPPLEINSRVSLKGGETIESGTVIFCDVLPKGESLGYFVGVDMDNPIGNWDGRFDG 280
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MQVELPPLEINSRVSLKVGETIESGTVIFCDVLPKGESLGYFVGVDMDNPIGNWDGRFDG 60

Qy          281 V-LCSFACVESTILLHINDIIPESVTQERRPPKLAFM SRGVGDKGSSSHNKP KATGSTSD 339
          | |||||||||||||||||||||||||||||||||||||||||||||||||||
Db          61 VQLCSFACVESTILLHINDIIPESVTQERRPPKLAFM SRGVGDKGSSSHNKP KATGSTSD 120

Qy          340 PGNR-RSELYFTLNGSSVDSQPQSKSKNTWYIDEVAEDPAKSLTEISTDFDRSSPPLQPP 398
          ||||| |||||||||||||||||||||||||||||||||||||||||||||||
Db          121 PGNRNRSELYFTLNGSSVDSQPQSKSKNTWYIDEVAEDPAKSLTEISTDFDRSSPPLQPP 180

Qy          399 PVNSLT TERNFHS LPPFSLTKMPNTNGSIGHSPLSLSAQSVMEELNTAPVQESPLAMPPG 458
          ||||||| |||||||||||||||||||||||||||||||||||||||||||
Db          181 PVNSLT TERNFHS LPPFSLTKMPNTNGSIGHSPLSLSAQSVMEELNTAPVQESPLAMPPG 240

Qy          459 NSHGLEVGSLAEVKENPPFYGVIRWIGQPPGLNEVLAGLELEDE CAGCTDGTFRGTRYFT 518
          ||||||| |||||||||||||||||||||||||||||||||||||||||||
```

Art Unit: 1644

```

Db      241 NSHGLEVGSLAEVKENPPFYGVIRWIGQPPGLNEVLAGLELEDECAGCTDGTFRGTRYFT 300
Qy      519 CALKKALFVKLKSCRPDSTRFASLQPVSNQIERCNSLAFGGYLSEVVEENTPPKMEKEGLE 578
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      301 CALKKALFVKLKSCRPDSTRFASLQPVSNQIERCNSLAFGGYLSEVVEENTPPKMEKEGLE 360
Qy      579 IMIGKKKGIQGHYNSCYLDSTLFLCLFAFSSVLDTVLLRPKEKNDVEYYSETQELLRTEIV 638
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      361 IMIGKKKGIQGHYNSCYLDSTLFLCLFAFSSVLDTVLLRPKEKNDVEYYSETQELLRTEIV 420
Qy      639 NPLRIYGYVCATKIMKLKILEKVEAASGFTSEEKDPPEEFLNLFHHILRVEPLLKIRSA 698
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      421 NPLRIYGYVCATKIMKLKILEKVEAASGFTSEEKDPPEEFLNLFHHILRVEPLLKIRSA 480
Qy      699 GQKVQDCYFYQIFMEKNEKVGVP TIQQLEWSFINSNLKFAEAPSCLIIQMPRFGKDFKL 758
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      481 GQKVQDCYFYQIFMEKNEKVGVP TIQQLEWSFINSNLKFAEAPSCLIIQMPRFGKDFKL 540
Qy      759 FKKIFPSLELNITDLEDTPRQCRICGGLAMYECRECYDDPDISAGKIKQFCKTCNTQVH 818
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      541 FKKIFPSLELNITDLEDTPRQCRICGGLAMYECRECYDDPDISAGKIKQFCKTCNTQVH 600
Qy      819 LHPKRLNHKYNPVSLPKDLPDWDWRHGCIPCQNMELFAVLCIETSHYVAFVKYKDDSAW 878
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      601 LHPKRLNHKYNPVSLPKDLPDWDWRHGCIPCQNMELFAVLCIETSHYVAFVKYKDDSAW 660
Qy      879 LFFDSMADRGGQNGFNIPQVTPCPEVGEY LKMSLEDLHSLDSRRIQGCARRLLCDA YMC 938
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      661 LFFDSMADRGGQNGFNIPQVTPCPEVGEY LKMSLEDLHSLDSRRIQGCARRLLCDA YMC 720
Qy      939 MYQSPTMSLYK 949
        ||||||||||||
Db      721 MYQSPTMSLYK 731

```

Conclusion

5. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2, 20-24, 38, 42, 44-46 and 48-50 are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eileen B. O'Hara whose telephone number is (571) 272-0878.

The examiner can normally be reached on 9:00-5:30 M-F.

Art Unit: 1644

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eileen B. O'Hara/
Primary Examiner
Art Unit 1638